

AMENDMENTS TO THE CLAIMS

1. (Previously presented) An apparatus for selectively encrypting data for transmission over a network between a server and a client, the apparatus comprising:

a parser configured to parse a first portion of the data from a second portion of the data;
an encrypter configured to determine if the first portion of the data is to be encrypted based on a format of the first portion of the data, and if it is to be encrypted, to encrypt the first portion of the data; and

a data combiner configured to combine the first portion of the data with the second portion of the data, wherein the second portion of the data includes more than routing information.

2. (Previously presented) The apparatus of claim 1, wherein the data includes streaming data.

3. (Previously presented) The apparatus of claim 1, wherein the first portion of the data includes payload data.

4. (Previously presented) The apparatus of claim 1, wherein the second portion of the data includes at least one of a header, control data and routing data.

5. (Previously presented) The apparatus of claim 1, further comprising a transmitter configured to send the combined first and second portions of the data over the network to the client.

6. (Previously presented) The apparatus of claim 1, further comprising a receiver configured to receive the data from the server before the data is sent over the network to the client.

7. (Previously presented) The apparatus of claim 1, further comprising a device configured to establish a data stream between the server and the client.

8. (Previously presented) The apparatus of claim 1, further comprising a key negotiator configured to negotiate an encryption key with the client.

9. (Previously presented) The apparatus of claim 8, wherein key negotiation and key exchange occur during transmission of a stream.

10. (Previously presented) The apparatus of claim 9, wherein the encrypter is transparent to the server.

11. (Previously presented) The apparatus of claim 8, wherein key negotiation can determine if the encryption key is current.

12. (Previously presented) The apparatus of claim 1, further comprising a decrypter configured to decrypt the first portion of the data.

13. (Previously presented) The apparatus of claim 1, wherein the parser is further configured to parse the data into different portions based on a media format.

14. (Previously presented) The apparatus of claim 1, wherein the encrypter is further configured to encrypt the first portion of the data based on a media format.

15. (Previously presented) The apparatus of claim 1, wherein the apparatus is implemented utilizing an application that includes a pluggable core encoding an encryption algorithm for encrypting the first portion of the data, wherein the pluggable core enables the encryption algorithm to be readily changed.

16. (Previously presented) The apparatus of claim 1, wherein the apparatus is implemented on an encryption bridge.

17. (Previously presented) A method for selectively encrypting data received from a data source, the data including first and second portions which differ from each other in at least one characteristic, the received data to be subsequently sent over a network to a client, the method comprising:

 parsing the received data into portions including the first and second portions;

 determining if the first portion is to be encrypted based on a format of the first portion, and if it is to be encrypted, encrypting the first portion of the received data; and

 sending the received data including the first portion and the second portion of the received data over the network to the client.

18. (Previously presented) The method of claim 17, wherein the data source is a server.

19. (Previously presented) The method of claim 17, further comprising determining whether a stream is established between a server and the client.

20. (Previously presented) The method of claim 17, further comprising negotiating an encryption key with the client.

21. (Previously presented) The method of claim 20, wherein the received data from the data source is streaming data sent during a streaming session and the negotiating of the encryption key is carried out during the streaming session.

22. (Previously presented) The method of claim 20, wherein the received data from the data source is streaming data sent during a streaming session, the method further comprising examining the client during the streaming session and terminating the streaming session if the encryption key on the client is invalid.

23. (Previously presented) The method of claim 20, wherein the encryption key is negotiated with a decryption shim on the client.

24. (Previously presented) The method of claim 17, further comprising determining whether the received data is streaming data.

25. (Previously presented) The method of claim 24, further comprising parsing, encrypting and sending the data if the data is streaming data and sending the data if the data is not streaming data.

26. (Previously presented) The method of claim 17, further comprising determining whether a shim is present on the client.

27. (Previously presented) The method of claim 26, further comprising sending a shim to the client if it is determined that the shim is not present on the client.

28. (Previously presented) The method of claim 17, further comprising determining whether an encryption key on the client is current.

29. (Previously presented) The method of claim 17, wherein the data includes a payload data portion and at least one of a header, control data and routing data.

30. (Previously presented) The method of claim 29, wherein the first portion of the data includes the payload data portion.

31. (Previously presented) The method of claim 17, wherein the data received from the data source for sending to the client is a stream of packets, the method further comprising determining whether a packet is the last packet in a data stream.

32. (Previously presented) The method of claim 31, further comprising receiving feedback from a decryption shim on the client if it is determined that the packet is not the last packet in the data stream.

33. (Previously presented) The method of claim 17, further comprising determining whether the client is compromised.

34. (Previously presented) The method of claim 33, further comprising continuing parsing, encrypting and sending the data into the first and second portions if it is determined that the client is not compromised.

35. (Previously presented) The method of claim 33, further comprising terminating the sending to the client if it is determined that the client is compromised.

36. (Previously presented) A method for streaming data at a client, the data including first and second portions which differ from each other in at least one characteristic, the data having been sent over a network to the client from an encryption source, the method comprising:

receiving the data sent over the network;

parsing the data into portions including the first and second portions; if the first portion of the data is encrypted based on a format of the data, decrypting the first portion of the data; and

passing the decrypted first portion of the data to a higher level of operations for play in the client.

37. (Previously presented) The method of claim 36, further comprising prior to the parsing, determining whether the data is an unencrypted stream.

38. (Previously presented) The method of claim 37, further comprising passing the data to a higher level of operations without parsing and decrypting when it is determined that the data is an unencrypted stream.

39. (Previously presented) The method of claim 36, further comprising negotiating a decryption key with the encryption source.

40. (Previously presented) The method of claim 39, wherein the streaming data is sent from the encryption source during a streaming session and said negotiating the decryption key is carried out during the streaming session.

41. (Previously presented) The method of claim 39, further comprising terminating a stream if the decryption key is invalid.

42. (Previously presented) The method of claim 36, wherein the first portion of the data includes a payload data portion.

43. (Previously presented) The method of claim 36, wherein the data is sent from the encryption source over the network as a stream of data packets, the method further comprising determining whether a packet received by the client is a last packet in a data stream.

44. (Previously presented) The method of claim 43, further comprising sending feedback to the encryption source if it is determined that the packet is not the last packet in the data stream.

45. (Previously presented) The method of claim 36, further comprising determining whether the client is compromised.

46. (Previously presented) The method of claim 45, further comprising continuing the parsing, decrypting and passing the data as aforesaid if it is determined that the client is not compromised.

47. (Previously presented) The method of claim 45, further comprising terminating a streaming session if it is determined that the client is compromised.

48. (Previously presented) The apparatus of claim 3, wherein the payload data includes multimedia data.

49. (Previously presented) The apparatus of claim 1, wherein the parser is further configured to parse the data into different portions based on a data protocol used to transmit a data stream.

50. (Previously presented) The apparatus of claim 1, wherein the parser parses the data based on the data protocol.

51. (Previously presented) The method of claim 41, wherein the terminating of the encrypted stream includes sending a feedback signal to the encryption source instructing to stop sending the data over the network.

52. (Previously presented) The method of claim 36, further comprising terminating a streaming session based on a determination that the client is compromised.

53. (Previously presented) A method for selectively encrypting data for transmission over a network, the method comprising examining the data to identify a plurality of portions; determining if at least one portion is to be encrypted based on a format of the at least one portion and if the at least one portion is to be encrypted, encrypting the at least one portion; and at least another portion to remain unencrypted, the plurality of portions being combined after such encryption determination.

54. (Previously presented) The method of claim 53, wherein the data is received from a data source, wherein the data includes streaming data and wherein the at least one data portion to remain unencrypted includes at least one of a header, control data and routing data.

55. (Previously presented) The method of claim 54, wherein the streaming data is included in the at least one data portion to remain unencrypted.

56. (Previously presented) The method of claim 55, further comprising:
transmitting the combined data over the network to a client; and
negotiating and exchanging a key with the client before the combined data is
transmitted over the network to the client, the key enabling the client to decrypt the encrypted
portion of the data for play on the client.

57. (Previously presented) The method of claim 56, wherein the streaming data is sent
during a streaming session and wherein the negotiating and exchanging the key is carried out
during the streaming session.

58. (Previously presented) The method of claim 57, further comprising examining the
client during the streaming session and terminating the streaming session if the key on the client
is invalid.

59. (Previously presented) The method of claim 58, wherein the data source is a
server and the examining is carried out on an encryption bridge between the server and the
network so that the examining of the data, encrypting and combining of the plurality of data
portions is transparent to the server.

60. (Previously presented) The method of claim 59, wherein the key negotiating and
exchanging and the decryption using the key is carried out using a shim on the client, the shim
being configured so that the negotiating and exchanging of the key thereby and the decrypting of
the data thereby is transparent to the client.

61. (Previously presented) An apparatus for selectively encrypting streaming data
received from a streaming data source for transmission over a network to a client, the apparatus
comprising:

a parser configured to parse a plurality of portions of the streaming data;
an encrypter configured to encrypt at least one of the plurality of data portions if it is
determined based on a format of the at least one of the plurality of data portions that the at least
one of the plurality of data portions is to be encrypted, but not encrypt at least one other data
portion of the plurality of data portions; and

a data combiner configured to combine the at least one encrypted data portion with at least one unencrypted data portion.

62. (Previously presented) The apparatus of claim 61, further comprising a negotiator, wherein the negotiator negotiates and exchanges a key with the client before the combined data is transmitted over the network to the client, the key enabling the client to decrypt the at least one encrypted portion of the data for play on the client.

63. (Previously presented) The apparatus of claim 62, wherein the streaming data is sent from the streaming data source during a streaming session.

64. (Previously presented) The apparatus of claim 63, further configured to perform actions including examining the client during the streaming session and terminating the streaming session if the client has been compromised.

65. (Previously presented) The apparatus of claim 61, wherein a second portion of the data includes at least one of a header, control data and routing data.

66. (Previously presented) The apparatus of claim 61, wherein the streaming data source is at least one server.

67. (Previously presented) An apparatus for selectively encrypting data received from a data source for transmission over a network to a client, comprising:

a parser configured to parse at least two portions of the data, at least one of the two portions of the data including more than routing information for a packet;

an encrypter configured to determine if only one portion of the data is to be encrypted based on a format of only the one portion the data, and if it is to be encrypted, encrypting only the one portion of data not including the routing information for the packet; and

a data combiner configured to combine the parsed at least two portions of the data following encryption of the one portion of data not including the routing information for the packet.

68. (Previously presented) The apparatus of claim 67, wherein the unencrypted portion of the data includes at least one of a header and control data.

69. (Previously presented) The apparatus of claim 68, wherein the parser parses the data into different portions based on a data protocol used to transmit the data.

70. (Previously presented) The apparatus of claim 68, wherein the portion of the data to be encrypted includes media data encoded in a media format and wherein the encrypter encrypts the data to be encrypted based on the media format.

71. (Previously presented) The apparatus of claim 70, wherein the apparatus is implemented utilizing an application that includes a pluggable core encoding an encryption algorithm for encrypting the data, the pluggable core being replaceable to enable the encryption algorithm to be readily changed.

72. (Previously presented) The apparatus of claim 71, wherein the apparatus is implemented on an encryption bridge.

73. (Previously presented) An apparatus for selectively encrypting data received from a data source during a downloading operation, the data being received from the data source for transmission over a network to a client receiving the downloaded data, comprising:

a parser configured to parse at least two portions of the data;

an encrypter configured to determine if one of the portions of the data is to be encrypted based on a format of the one portion of the data, and if it is to be encrypted, encrypting only one of the portions of data; and

a data combiner configured to combine the encrypted portion of data with an unencrypted portion of data for transmission over the network.

74. (Previously presented) The apparatus as defined in claim 73, wherein the downloaded data is included in the encrypted portion of the data.

75. (Previously presented) The apparatus of claim 74, wherein the unencrypted portion of data includes at least one of a header, control data and routing data.

76. (Previously presented) The apparatus of claim 75, further comprising a key negotiator configured to perform actions including negotiating and exchanging a key with the client before the data is sent over the network to the client, the key enabling the client to decrypt the encrypted portion of data.

77. (Canceled)

78. (Previously presented) An apparatus for selectively encrypting data, received from a data source during a downloading operation and for selectively encrypting data received from a data source during a streaming operation, the data being received from the data source for transmission over a network to a client receiving the downloaded or streaming data, comprising:

a means for parsing at least two portions of the data;

a means for determining if one of the at least two portions of data is to be encrypted based on a format of the one portion of data, and if the one portion of data is to be encrypted, employing a means for encrypting only one of the at least two portions of data; and

a means for combining the encrypted portion of the data with the at least the unencrypted portion of the data for transmission over the network.

79. (Previously presented) The apparatus of claim 78, wherein during the streaming operation, the streaming data is included in the data portion that is to be encrypted.

80. (Previously presented) The apparatus as defined in claim 79, further comprising a key negotiating means configured to negotiate and exchange a key with the client before the streaming data is sent over the network to the client, the key enabling the client to decrypt the encrypted portion of the data for play on the client.

81. (Canceled)

82. (Currently Amended) The apparatus of claim ~~81~~ 78, further comprising a client examining means configured to examine the client during ~~the~~ a streaming session and terminate the streaming session if the client has been compromised.

83. (Previously presented) The apparatus of claim 82, wherein the data portion that is not encrypted includes at least one of a header, control data and routing data.

84. (Previously presented) The apparatus of claim 78, wherein during a downloading operation, the downloaded data is included in the data portion that is to be encrypted.

85. (Previously presented) The apparatus of claim 84, wherein the data portion that is not encrypted includes at least one of a header, control data and routing data.

86. (Previously presented) A shim deployed on a client, the shim comprising:
a data receiver configured to receive partially encrypted data transmitted to the client, wherein another device determined a portion of the data to be encrypted based on a format of the portion of the data;

a parser configured to parse the partially encrypted data to select a portion of the data to be decrypted;

a decrypter configured to decrypt the portion of the data selected for decrypting by the parser; and

a data transmitter configured to send the decrypted data to a higher level operation resident on the client.

87. (Previously presented) The shim of claim 86, wherein an encrypted portion of the transmitted data includes media data, the data transmitter being further configured to send the decrypted media data to a media player resident on the client.

88. (Previously presented) The shim of claim 87, wherein the media data is streaming media transmitted to the client during a streaming session.

89. (Previously presented) The shim of claim 88, wherein the unencrypted portion of the data includes at least one of a header, control data and routing data.

90. (Previously presented) The shim of claim 88, further comprising an analyzer configured to analyze a behavior of the client to detect known media piracy techniques and to terminate the streaming session if a known media piracy technique is detected.

91. (Previously presented) The shim of claim 88, further comprising an analyzer configured to analyze a behavior of the client to detect suspicious client behavior and to terminate the streaming session if specific behavior is detected.

92. (Previously presented) The shim of claim 88, further comprising an analyzer configured to analyze a behavior of the client to detect known media piracy techniques and to terminate operation of at least the decrypter when a media piracy technique is detected.

93. (Previously presented) The shim of claim 88, further comprising an analyzer configured to analyze a behavior of the client to detect suspicious client behavior and to terminate the operation of at least the decrypter if suspicious behavior is detected.

94. (Previously presented) The shim of claim 88, further comprising a key negotiator configured to negotiate and exchange a key with the client before the data is sent over the network to the client, the key enabling the client to decrypt the encrypted portion of the data for play on the client.

95. (Previously presented) The shim of claim 88, wherein the streaming data is sent to the client from an encryption source, the shim further including a key negotiator configured to negotiate and exchange a key with the encryption source, the key being used by the decrypter to decrypt the encrypted portion of the data.

96. (Previously presented) The shim of claim 95 wherein the key negotiator is further configured to carry out the negotiating and exchanging of the key with the encryption source during the streaming session.

97. (Previously presented) A method for providing data over a network, comprising:
determining a plurality of portions of the data;
determining if at least one portion of the plurality of portions of the data is to be encrypted based on a format of the at least one portion, and if the at least one portion is to be encrypted, selectively encrypting at least one portion in the plurality of portions, wherein at least one other portion remains unencrypted;

authenticating a client to receive the selectively encrypted portion; and

transmitting the selectively encrypted portion to the authenticated client.

98. (Previously presented) The method of claim 97, wherein authenticating the client further comprises the client accepting a shim transmitted from a server that is selectively encrypting the portion, and wherein the shim is configured to send back a confirmation.

99. (Previously presented) The method of claim 97, wherein authenticating the client further comprises the client transmitting a self-generated certificate.